REMARKS/ARGUMENTS

The Applicants originally submitted Claims 1-21 in the application. The Applicants have not amended, canceled or added any claims. Accordingly, Claims 1-21 are currently pending in the application.

I.   **Rejection of Claims 1-3, 5, 7-10, 12 and 14 under 35 U.S.C. §102**

The Examiner has rejected Claims 1-3, 5, 7-10, 12 and 14 under 35 U.S.C. §102(e) as being anticipated by US Patent Application Publication No. 2006/0182169 to Belge, *et al.* The Applicants respectfully disagree as argued below.

As the Examiner is no doubt aware, anticipation requires that each and every element of the claimed invention be disclosed in a single prior art reference; the disclosed elements must either be disclosed expressly or inherently and must be arranged as in the rejected claims. The Examiner asserts Belge discloses a noise source identifier and estimator that measure and classify DSL loop characteristics, including crosstalk power level in the frequency domain. The Examiner relies on the central office modem 110 including the data collection module 120 for detecting and the interpretation module 150 for estimating. (*See* Examiner's Action, page 2.) Even assuming *arguendo* that this is true, Belge fails to disclose directly detecting a noise source in a frequency domain from observed noise associated with a communications system as recited in independent Claims 1 and 8. On the contrary, instead of "directly detecting a noise source," Belge estimates crosstalk type by varying the disturber type, power and white noise level to minimizing the mean square error between an observed power spectral density (PSD) and known spectral masks. (*See* paragraphs 91-92.) Belge picks possible values for power levels of disturber types to determine the

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minimum mean square error. (*See* paragraph 93.) Belge, therefore, uses an iterative approach of multiple passes over the data to determining the presence and level of interferers. As such, Belge does not directly detect (non-iteratively detect) a noise source as claimed in originally filed Claims 1 and 8. (*See* paragraph 7 of the original specification of the invention.)

Belge therefore, fails to teach each and every element of independent Claims 1 and 8 and Claims dependent thereon. As such, Belge does not anticipate Claims 1-3, 5, 7-10, 12 and 14. The Applicants, therefore, respectfully request the Examiner to withdraw the §102 rejection with respect to Claims 1-3, 5, 7-10, 12 and 14 and allow issuance thereof.

II.   **Rejection of Claims 4, 6, 11 and 13 under 35 U.S.C. §103**

The Examiner has rejected Claims 4, 6, 11 and 13 under 35 U.S.C. §103(a) as being unpatentable over US Patent Application Publication No. 2006/0182169 to Belge, *et al* as applied to Claims 1 and 8. The Applicants respectfully disagree.

As noted above, Belge fails to disclose each element of independent Claims 1 and 8. Additionally, Belge fails to suggest each element of independent Claims 1 and 8 since Belge discloses a multi-pass, iterative approach of minimizing the mean square error between observed PSDs and known spectral masks. (*See* paragraphs 89-93.) Thus, Belge fails to teach or suggest directly detecting a noise source in a frequency domain from observed noise associated with a communications system as recited in independent Claims 1 and 8.

As such, Belge does not provide a *prima facie* case of obviousness of independent Claims 1 and 8 and Claims dependent thereon. The Applicants therefore respectfully request the

Examiner withdraw the §103(a) rejection of Claims 4, 6, 11 and 13, which depend on Claims 1 and 8, respectively, and allow issuance thereof.

III.   Rejection of Claims 15-21 under 35 U.S.C. §103

The Examiner has rejected Claims 15-21 under 35 U.S.C. §103(a) as being unpatentable over US Patent Application Publication No. 2006/0182169 to Belge, *et al* in view of US Patent No. 6,567,465 to Goldstein, *et al*. The Applicants respectfully disagree.

As argued above, Belge does not teach or suggest directly detecting a noise source in a frequency domain from observed noise associated with a communications system as recited in independent Claims 1 and 8. Analogously, Belge does not teach or suggest each element of independent Claim 15 which includes a crosstalk identifier that detects directly in a frequency domain a noise source from observed noise associated with a channel.

Goldstein has not been cited to cure the deficiencies of Belge but has been cited to disclose a DSL modem with a front end, transmitter/receiver. (*See* Examiner's Action, page 4.) As such, the cited combination of Belge and Goldstein does not provide a *prima facie* case of obviousness of independent Claim 15 and Claims dependent thereon. The Applicants, therefore, respectfully request the Examiner withdraw the §103(a) rejection of Claims 15-21 and allow issuance thereof.

IV.   Conclusion

        In view of the foregoing remarks, the Applicants believe all of the Claims currently

pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of

Allowance for Claims 1-21.

        The Applicants request the Examiner to telephone the undersigned attorney of record at

(972) 480-8800 if such would further or expedite the prosecution of the present application. The

Commissioner is hereby authorized to charge any fees, credits or overpayments to Deposit Account

20-0668.

                                        Respectfully submitted,

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Dated: September 25, 2007

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